



# FACILITY COMPLIANCE INSPECTION REPORT

## Division of Waste Management

### Solid Waste Section

**UNIT TYPE:**

Lined MSWLF		LCID		YW		Transfer		Compost		SLAS		COUNTY: MADISON PERMIT NO.: 58-02 FILE TYPE: COMPLIANCE
Closed MSWLF	X	HHW		White goods		Incineration		T&P		FIRM		
CDFL		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF		

**Date of Site Inspection:** December 5, 2011

**Date of Last Inspection:** July 11, 2011

**FACILITY NAME AND ADDRESS:**

Madison County Municipal Solid Waste Landfill  
389 Long Branch Road  
Marshall, NC 28753

**GPS COORDINATES:** N: 35.80182 E: -82.65050

**FACILITY CONTACT NAME AND PHONE NUMBER:**

Name: Jim Huff, Madison County Solid Waste Director  
Telephone: 828-649-2311  
Email address: [jhuff@madisoncountync.org](mailto:jhuff@madisoncountync.org)

**FACILITY CONTACT ADDRESS:**

Madison County Solid Waste Department  
271 Craig Rudisill Road  
Marshall, NC 28753

**PARTICIPANTS:**

Andrea Keller – NCDENR Solid Waste Section  
Jim Huff – Madison County Solid Waste Director

**STATUS OF PERMIT:**

CLOSED: One Category I MSWLF cell and Two Category II MSWLF cells per the 10/19/1994 Landfill Closure Plan drawing no. 93131.  
Closure Letter dated: 12/21/95

**PURPOSE OF SITE VISIT:**

Follow-up records review – Landfill Gas (LFG)

**STATUS OF PAST NOTED DEFICIENCIES:****ONGOING: 15A NCAC 13B .0503 (2) A site shall meet the following design requirements:**

- (a) The concentration of explosive gases generated by the site shall not exceed:
  - (i) twenty-five percent of the limit for the gases in site structures (excluding gas control or recovery system components); and
  - (ii) the lower explosive limit for the gases at the property boundary;

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On March 24, 2011, the facility documented a LFG exceedance at the property boundary in wells GP-5 and GP-6. The inspection report dated July 11, 2011 stated that the facility must prepare and implement a remediation plan by May 23, 2011. The submitted plan included a trench system, which was completed on July 21, 2011. Current LFG data indicated that the facility is still exceeding the lower explosive limit for LFG at the property boundary.

As the Permitted landfill encompasses two site structures (see item #4 below), and as there is known methane production and migration occurring at the landfill, the facility should incorporate structure monitoring into all LFG monitoring events to verify compliance with 15A NCAC 13B .0503(2)(a)(i). In addition, the LFG Monitoring Plan should be updated to include the monitoring of site structures and to accurately depict the Permitted facility boundary.

**OBSERVED DEFICIENCIES:** None

The item(s) listed above were observed by Section staff and require action on behalf of the facility in order to come into or maintain compliance with the Statutes, Rules, and/or other regulatory requirements applicable to this facility. Be advised that pursuant to N.C.G.S. 130A-22, an administrative penalty of up to \$15,000 per day may be assessed for each violation of the Solid Waste Laws, Regulations, Conditions of a Permit, or Order under Article 9 of Chapter 130A of the N.C. General Statutes. Further, the facility and/or all responsible parties may be subject to enforcement actions including penalties, injunction from operation of a solid waste management facility or a solid waste collection service and any such further relief as may be necessary to achieve compliance with the North Carolina Solid Waste Management Act and Rules.

**ADDITIONAL COMMENTS**

1. On site at 58-03 Transfer Station to conduct data review and to discuss the status of the LFG exceedances in property boundary wells GP-5 and GP-6 at the Closed 58-02 MSWLF.
2. The County had submitted a LFG mitigation plan to the Section and had completed the construction of a vent/trench system by July 21, 2011 (per JHuff).



3. Ongoing LFG data collection results were reviewed:

Date	GP-5 CH4 % Vol	GP-6 CH4 % Vol	%LEL
3/29/2011	>5%	>5%	>100%
5/3/2011	>5%	>5%	>100%
6/2/2011	>5%	>5%	>100%
7/8/2011	32%	50%	>100%
8/5/2011	35%	48%	>100%
8/16/2011	10%	46%	>100%
9/7/2011	32%	48%	>100%
10/3/2011	18%	45%	>100%
10/26/2011	28%	44%	>100%
12/2/2011	17%	48%	>100%

Mr. Huff stated that the County felt that trench was functional but that he would review the construction

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records for the trench in the location of GP-6 as he knew that rock had been encountered in this region. This type of LFG mitigation (trench system/vents) can take time to become fully functional. However, if the required mitigation does not occur with the existing design, other methods should be explored including, but not limited to, reworking the existing trench system or the expansion of the landfill buffer with installation of additional property boundary LFG wells.

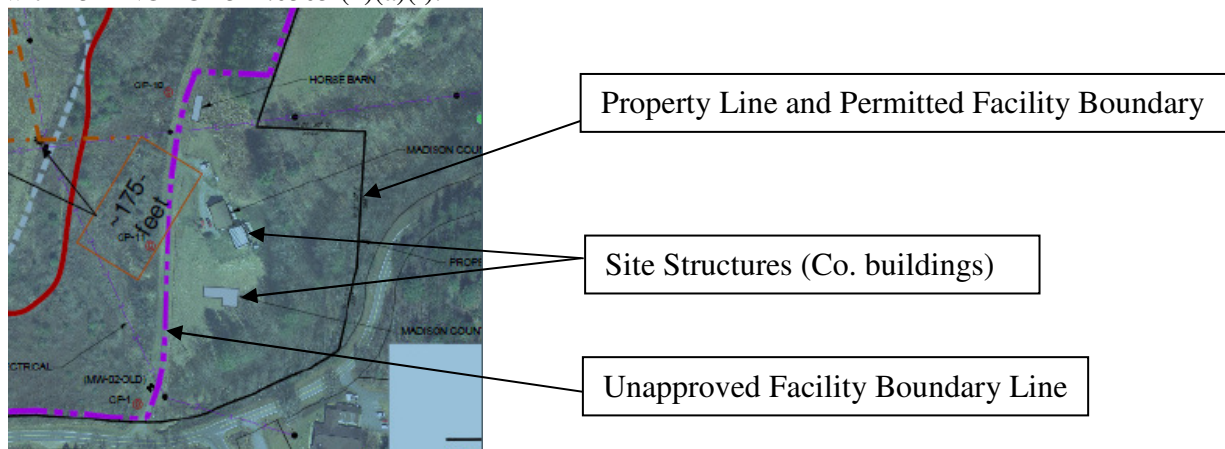
4. The Facility inspection reported dated May 3, 2011 stated the following:

*The previous audit report (10/12/09) discussed Post Closure Condition requirements regarding the monitoring of Landfill Gas (LFG) at the facility. The facility submitted a LFG Monitoring Plan (dated 4/20/10) which was approved by the Section on April 27, 2010.*

*The LFG Monitoring Plan contained a site map (Figure 1) which contained a new “Facility Boundary” designation which differed from the previously approved Facility Boundary (which matched the existing Property Line as depicted in Figure 1).*

*Please note that changes to facility boundaries require a Permit Modification with the Section. Contact Allen Gaither (828-296-4703; [allen.gaither@ncdenr.gov](mailto:allen.gaither@ncdenr.gov)), permit engineer for Madison Co., to discuss further.*

Additionally, the facility received a letter from Mr. Gaither dated May 23, 2011, which re-stated the Section requirements for facility boundary modifications. Please note that as the County has not submitted for a modification of the approved facility boundary, the Permitted boundary is considered to be the original property boundary as depicted in the LFG Plan. As such, the site structures located within the Permitted boundary should immediately be incorporated into all LFG sampling events in order to verify compliance with 15A NCAC 13B .0503 (2)(a)(i).

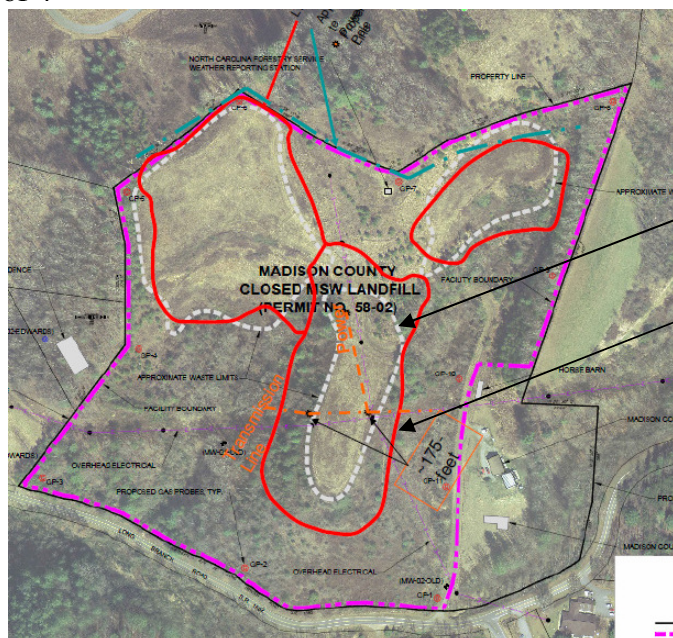


LFG Plan Figure 1

5. Edge-of-Waste (EOW) markers at the 58-02 Closed MSWLF are in place and the LFG Plan Figure 1, shown below, indicates (in white) the location of the waste disposal units and the existing EOW markers. The 1994 Closure map (Jensen Engr.) on file with the Section indicates (in red) the certified EOW. As shown below, there is a significant discrepancy with regard to the southern-most cell. According to the Closure map, it appears as though the slope, visible on site, contains waste and that the EOW markers are not in the correct locations for this unit.

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EOW based on current site markers

EOW based on Closure map

Overlay of LFG Plan Figure 1 with the Jensen Engr. 1994 Closure Map

In order to verify the actual EOW a site review is recommended. Please contact the Section (A. Keller) to schedule a site visit and to discuss options for verification (ex. Hand-auguring test holes) of the waste disposal limits.

Please contact me if you have any questions or concerns regarding this inspection report.

Andrea Keller  
Environmental Senior Specialist  
*Regional Representative*

Phone: 828-296-4700

Sent on: January 9, 2012		Email: <a href="mailto:jhuff@madisoncountync.org">jhuff@madisoncountync.org</a>				US Mail: Madison County Solid Waste Department 271 Craig Rudisill Road Marshall, NC 28753	DIN ID# 15740
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ec: Mark Poindexter, Field Operations Branch Head – Solid Waste Section  
Jason Watkins, Western District Supervisor – Solid Waste Section  
Shawn McKee, Compliance Officer – Solid Waste Section  
Ed Mussler, Permitting Branch Manager – Solid Waste Section